

REMARKS

Favorable reconsideration of this application, in light of the following discussion and in view of the present amendment, is respectfully requested.

Claims 4-5, 10-11, and 16-17 have been amended. Claims 1-20 are pending and under consideration.

I. Claim Objections

In the Office Action, at pages 2-3, claims 4-5, 10-11, 16-17, and 20 were objected to due to various informalities. Claims 4-5, 10-11, and 16-17 have been amended in response to these objections. Claim 20 does not appear to contain the informality indicated by the Examiner. Therefore, withdrawal of these objections is respectfully requested.

II. Rejection under 35 U.S.C. § 103

In the Office Action, at pages 3-26, claims 1-20 were rejected under 35 U.S.C. § 103(a) as unpatentable over Murphy (U.S. Patent No. 6,094,164) and Calvert et al. (U.S. Patent Application Publication No. 2002/0102989) and Crabtree et al. (U.S. Patent No. 6,788,199) and further in view of Gwon et al. (U.S. Patent Application Publication No. 2004/203904).

Murphy does not discuss or suggest:

a unit calculating only a distance between the measuring apparatus and the search object, the distance being independent from a direction of the search object with respect to the measuring apparatus;

as recited in claim 1. In other words, the invention of 1 calculates only a distance between the measuring apparatus and the search object, wherein the distance is calculated independent of a direction of the search object with respect to the measuring apparatus. As a result, the position of the search object is calculated by solving an equation of circles in which each circle has a radius equal to the calculated distances between each of a plurality of measuring apparatuses and the search object. Since the position of the search object is calculated through such an equation of circles, only distance information between each of the measuring apparatuses and the search object is needed, thereby speeding up the time that is required for locating the search object. The Examiner states that the teaching of Murphy that tracking unit 10 determines the distance of object 12 meets the limitation of claim 1, in which a unit calculates only a distance between the measuring apparatus and the search object independent of a direction of the search object with respect to the measuring apparatus. However, it is submitted that this is incorrect. Murphy, as relied on by the Examiner, discloses that a tracking unit of a position

determining device determines the direction, range, and bearing of the search object (Murphy, col. 4, lines 55-60; col. 6, lines 48-50). Murphy does not disclose calculating only a distance between the position determining device and the search object that is independent of a direction of the search object with respect to the position determining device. Furthermore, Calvert et al., Crabtree et al., and Gwon et al. are silent on these features of the invention of claim 1.

Furthermore, the Examiner concedes that the combination of Murphy and Calvert et al. does not teach wherein a search range, within which the position of the search object is requested, is determined as a search range in which the request apparatus is centered. Therefore, the combination of Murphy and Calvert et al. does not discuss or suggest:

a unit accepting from the request apparatus a search request for searching the position of the search object, wherein a search range, within which the position of the search object is requested, is determined as a search range in which the request apparatus is centered and in which a radio wave from the request apparatus is able to be received,

as recited in claim 1. The Examiner attempts to make up for this deficiency with Crabtree et al. However, Crabtree et al. does not discuss or suggest:

a unit accepting from the request apparatus a search request for searching the position of the search object, wherein a search range, within which the position of the search object is requested, is determined as a search range in which the request apparatus is centered and in which a radio wave from the request apparatus is able to be received,

as recited in claim 1. In other words, the invention of claim 1 defines a search range for a search object as a range in which both the request apparatus is centered and in which a radio wave from the request apparatus is able to be received. Crabtree et al., as relied on by the Examiner, discloses a locator 10 that, when activated by the user 12, sends a modulated RF signal including a selected ID code in order to detect the location of a transceiver 11 that corresponds to the selected ID code. However, Crabtree et al. makes no mention of the user 12 being centered within the search area and there is no indication of the direction in which the modulated RF signal is being emitted. Furthermore, the invention of claim 1 requires the search object to be within the search range. In contrast, the undefined search range of Crabtree et al. does not require the desired transceiver 11 to be located within such an undefined range. In Crabtree et al. it is possible that the desired transceiver 11 may not be within RF signal range of the locator 10 at a time when the locator 10 is being used, which is contrary to claim 1. Gwon et al. is also silent on this feature of the invention of claim 1.

Since none of Murphy, Calvert et al., Crabtree et al., and Gwon et al., alone or in combination, discuss or suggest all of the features of the invention of claim 1, claim 1 patentably distinguishes over the references relied upon. Accordingly, withdrawal of the § 103(a) rejection is respectfully requested.

Claims 2-3 depend either directly or indirectly from independent claim 1, and include all the features of claim 1, plus additional features that are not discussed or suggested by the references relied upon. Therefore, claims 2-3 patentably distinguish over the references relied upon for at least the reasons noted above. Accordingly, withdrawal of these § 103(a) rejections is respectfully requested.

None of the prior art cited by the Examiner discusses or suggests:

calculating only a distance between each of the plurality of measuring apparatuses and the search object from the response received, the distance being independent from a direction of the search object with respect to the measuring apparatus;

and

wherein a search range, within which the position of the search object is requested, is determined as a search range in which the request apparatus is centered and in which a radio wave from the request apparatus is able to be received,

as recited in claims 8 and 14, so that claims 8 and 14 patentably distinguish over the references relied upon. Accordingly, withdrawal of these § 103(a) rejection is respectfully requested.

Claims 9 and 15 depend directly from independent claims 8 and 14, respectively, and include all the features of claims 8 and 14, respectively, plus additional features that are not discussed or suggested by the references relied upon. Therefore, claims 9 and 15 patentably distinguish over the references relied upon for at least the reasons noted above. Accordingly, withdrawal of these § 103(a) rejection is respectfully requested.

None of the prior art cited by the Examiner discusses or suggests:

wherein each of the plurality of measuring apparatuses is mobile and calculates only a distance between each of the plurality of measuring apparatuses and the search object, each distance being independent from a direction of the search object with respect to each of the measuring apparatuses, and the plurality of measuring apparatuses located around the search object cooperate with the service device;

and

wherein a search range, within which the position of the search object is requested, is determined as a search range in which the request apparatus is centered and in which a radio wave from the

request apparatus is able to be received,
as recited in claims 4-5, 10-11, and 16-17. Therefore, claims 4-5, 10-11, and 16-17 patentably distinguish over the references relied upon. Accordingly, withdrawal of these § 103(a) rejections is respectfully requested.

Claims 6-7, 12-13, and 18-19 depend either directly or indirectly from independent claims 5, 11, and 17, respectively, and include all the features of claims 5, 11, and 17, respectively, plus additional features that are not discussed or suggested by the references relied upon. Therefore, claims 6-7, 12-13, and 18-19 patentably distinguish over the references relied upon for at least the reasons noted above. Accordingly, withdrawal of these § 103(a) rejections is respectfully requested.

None of the prior art cited by the Examiner discusses or suggests:

a unit accepting from the request apparatus a search request for searching the position of the search object, wherein a search range, within which the position of the search object is requested, is determined as a search range in which the request apparatus is centered and in which a radio wave from the request apparatus is able to be received;

and

a unit calculating only a distance between the measuring apparatus and the search object, the distance being independent from a direction of the search object with respect to the measuring apparatus,

as recited in claim 20. Therefore, claim 20 patentably distinguishes over the cited prior art. Accordingly, withdrawal of the § 103(a) rejection is respectfully requested.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

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If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

By: 

Aaron C. Walker
Registration No. 59,921

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1201 New York Ave, N.W., 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501